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ABSTRACT

Compiled as a workshop handbook, this guide presents information to help food service program administrators comply with federal regulations and evaluate and upgrade their operations. Part I discusses requirements of the National School Lunch Program, focusing on the "offer versus serve" method of service enacted in 1976 to reduce waste. After an explanation of school lunch menu requirements, menu planning and production planning for reimbursable lunches are detailed. Steps for making "offer versus serve" work are outlined, and meal pattern monitoring for determining whether requirements have been met is discussed. Part II addresses the relationship of food service programs with student customers and offers techniques for efficient kitchen management. Topics covered include public relations, merchandising on the serving line, types of food service, and time management. Review exercises are provided in both chapters. Appendixes include advice for controlling food costs, converting servings, buying food, and precosting. (MJL)

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FOCUS on Efficient Management

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Office of Resource Management
Division of School Food Services
Kentucky Department of Education
Raymond Barber, Superintendent of Public Instruction

1983

A MESSAGE FROM THE SUPERINTENDENT

We are pleased that you have taken the time to participate in the 1983 summer training programs for school food service personnel. Again this year the Department of Education is providing workshops in eleven locations throughout the state. Your participation in these workshops indicates that employees involved in school food service programs in our state are interested in improving their skills and their ability to serve the students in Kentucky's schools. We are proud of the effort you are making on behalf of our students and know that you will continue to show the dedication that food service personnel have consistently shown throughout the years.

Raymond Barber

Raymond Barber
Superintendent of Public Instruction
Kentucky Department of Education

INTRODUCTION

It is our belief that efficient and creative management is the basis for any cost effective school food service program. The 1983 summer food service workshops have been planned to provide training and learning activities to improve skills in this area. The subjects presented in this booklet focus on information which will help participants understand and comply with federal regulations in an effective manner and evaluate and enhance their food service operations.

Part I concentrates on meeting requirements of federal regulations. The focus is on the offer versus serve provision and meal pattern monitoring. Since the offer versus serve provision may be implemented from high school to kindergarten, the first section in Part I provides pertinent information regarding this regulation. Meal pattern monitoring is a procedure used to determine if meal pattern requirements have been met and is also included in the first section.

Part II is a section which was originally compiled for the 1982 workshop booklet. This part includes public relations, merchandising, types of food service, and time management. The information is designed to allow participants to judge their relationship with their student "customers" and evaluate their effectiveness in the kitchen. Increased participation and more efficient kitchen management are goals of this section. This part is being included in the 1983 booklet to allow this year's workshop participants to take advantage of the suggestions offered.

As food service personnel continue to strive for better and more efficient program management for the 1983-84 school year, it is of utmost importance to keep in mind that program regulations must be met in order to maintain the nutritional integrity and accountability of the Child Nutrition Programs.

W. Cooper Whitt

W. Cooper Whitt, Director
Division of School Food Services
Kentucky Department of Education

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Child Nutrition Programs are available to all children without regard to race, color, handicap, national origin, sex or age.

Part I

OFFER VERSUS SERVE

MEAL PATTERN MONITORING

CHART 1

SCHOOL LUNCH PATTERNS FOR VARIOUS AGE/GRADE GROUPS

U.S. Department of Agriculture, National School Lunch Program

USDA recommends, but does not require, that you adjust portions by age/grade group to better meet the food and nutritional needs of children according to their ages. If you adjust portions, Groups I-IV are minimum requirements for the age/grade groups specified. If you do *not* adjust portions, the Group IV portions in the shaded column are the portions to serve all children.

COMPONENTS		MINIMUM QUANTITIES				RECOMMENDED QUANTITIES[1]	SPECIFIC REQUIREMENTS
		Preschool		Grades K-3	Grades 4-12[1]	Grades 7-12	
		ages 1-2 (Group I)	ages 3-4 (Group II)	ages 5-8 (Group III)	age 9 & over (Group IV)	age 12 & over (Group V)	
MEAT OR MEAT ALTERNATE	**A serving of one of the following or a combination to give an equivalent quantity:**						• Must be served in the main dish or the main dish and one other menu item. • Textured vegetable protein products, cheese alternate products, and enriched macaroni with fortified protein may be used to meet part of the meat/meat alternate requirement. Fact sheets on each of these alternate foods give detailed instructions for use. NOTE: The amount you must serve of a single meat alternate may seem too large for the particular age group you are serving. To make the quantity of that meat alternate more reasonable, use a smaller amount to meet part of the requirement and supplement with another meat or meat alternate to meet the full requirement.
	Lean meat, poultry, or fish (edible portion as served)	1 oz	1 1/2 oz	1 1/2 oz	2 oz	3 oz	
	Cheese	1 oz	1½ oz	1½ oz	2 oz	3 oz	
	Large egg(s)	1/2	1	1	1	1 1/2	
	Cooked dry beans or peas	1/4 cup	3/8 cup	3/8 cup	½ cup	3/4 cup	
	Peanut butter	2 Tbsp	3 Tbsp	3 Tbsp	4 Tbsp	6 Tbsp	
VEGETABLE AND/OR FRUIT	**Two or more servings of vegetable or fruit or both to total**	1/2 cup	1/2 cup	1/2 cup	3/4 cup	3/4 cup	• No more than one-half of the total requirement may be met with full-strength fruit or vegetable juice. • Cooked dry beans or peas may be used as a meat alternate or as a vegetable but not as both in the same meal.
BREAD OR BREAD ALTERNATE	**Servings of bread or bread alternate** A serving is: • 1 slice of whole-grain or enriched bread • A whole-grain or enriched biscuit, roll, muffin, etc. • ½ cup of cooked whole-grain or enriched rice, macaroni, noodles, whole-grain or enriched pasta products, or other cereal grains such as bulgur or corn grits • A combination of any of the above	5 per week	8 per week	8 per week	8 per week	10 per week	• At least ½ serving of bread or an equivalent quantity of bread alternate for Group I, and 1 serving for Groups II-V, must be served daily. • Enriched macaroni with fortified protein may be used as a meat alternate or as a bread alternate but not as both in the same meal. NOTE: *Food Buying Guide for School Food Service*, PA-1257 (1980) provides the information for the minimum weight of a serving.
MILK	**A serving of fluid milk**	3/4 cup (6 fl oz)	3/4 cup (6 fl oz)	1/2 pint (8 fl oz)	1/2 pint (8 fl oz)	1/2 pint (8 fl oz)	At least one of the following forms of milk must be offered: • Unflavored lowfat milk • Unflavored skim milk • Unflavored buttermilk NOTE: This requirement does not prohibit offering other milks, such as whole milk or flavored milk, along with one or more of the above.

[1]Group IV is shaded because it is the one meal pattern which will satisfy all requirements if no portion size adjustments are made.

[2]Group V specifies recommended, not required, quantities for students 12 years and older. These students may request smaller portions, but not smaller than those specified in Group IV.

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OFFER VERSUS SERVE

Background and Introduction

"Offer versus serve" is a serving method designed to reduce food waste and food costs in the National School Lunch Program without jeopardizing the nutritional integrity of the lunches served. It allows senior high school students and, when approved by the local school food authority, students in any other grade to decline food they do not intend to eat.

In 1975 Congress mandated that students "in senior high schools which participate in the school lunch program...shall not be required to accept foods which they do not intend to consume, and any such failure to accept offered foods shall not affect the full charge to the student for a lunch meeting the requirements...". This was the introduction of the offer versus serve provision.

In June 1976, National School Lunch Program regulations were amended to allow senior high schools to implement the offer versus serve provision. The amendment stated that senior high school students shall be offered all five items of the lunch meal pattern. Students must choose at least three of the five food items for a reimbursable meal. In 1978, this provision was further extended to junior high and middle schools at the option of local school food authorities.

In a further effort to reduce food waste, in 1981, Congress extended the optional use of offer versus serve to elementary schools. This act still requires offer versus serve in senior high schools, however the local school food authority was given the option of implementing offer versus serve in junior high, middle, and elementary schools. The final regulations allow school food authorities to determine whether students at junior high level or below may decline up to two items or only one item under offer versus serve. This flexibility was given because of concerns that allowing younger students to decline two food items lessens the nutritional aspects of the program.

The Reimbursable Lunch Under Offer Versus Serve

SCHOOL LUNCH MEAL REQUIREMENTS--WHAT MUST BE OFFERED. 7CFR Part 210.10 sets forth the requirements for lunches served in schools participating in the National School Lunch Program. The requirements are designed to provide approximately one-third of the student's Recommended Dietary Allowances (when averaged over a period of time). The school lunch meal requirements consist of four food components: (1) meat or meat alternate, (2) vegetable and/or fruit, (3) bread or bread alternate, and (4) milk. The vegetable/fruit component must be met by providing two (or more) servings of vegetables, fruits, or a combination of vegetables and fruits. This means there are five required food items. The first requirement for a lunch to be reimbursable under offer versus serve is that all five food items must be offered (made available) to all students. (See School Lunch Meal Pattern)

The second requirement is that the serving size offered of those five food items must be consistent with the minimum quantities for the age group being

served. Because the vegetable/fruit component consists of two or more servings of vegetables or fruits which totaled must meet a minimum quantity, the available quantity of each menu item offered must be consistent with the planned serving size for each item. Because the bread requirement is a weekly requirement, the quantity of bread or bread alternate offered must be consistent with the day's planned serving size needed to meet the weekly requirement.

The difference in schools implementing or not implementing offer versus serve is in what a student is required to take of the offered lunch. In schools not implementing offer versus serve, a student must take the entire five food item lunch in the full portions offered. In schools implementing offer versus serve, a student may decline or take a smaller portion of one or two food items, depending on the grade level and how the local school food authority has chosen to implement the provision in grades below the senior high school level.

A REIMBURSABLE SENIOR HIGH SCHOOL LUNCH. By Federal regulation (7 CFR Part 210.10) in senior high schools a lunch is reimbursable if a student takes three or more of the five food items offered. This means a student may turn down one or two food items--those items he or she does not intend to eat. When a student has declined a full portion of any item, schools may offer the student a smaller portion of the item. (The offering of smaller portions is not mandatory and is a local decision.) For a lunch to be reimbursable, however, at least three of the required food items must be taken in full portions.

A REIMBURSABLE ELEMENTARY, MIDDLE, OR JUNIOR HIGH SCHOOL LUNCH. By Federal regulation, the local school food authority has discretionary authority (1) to implement or not implement offer versus serve in schools below the senior high school level, and (2) to determine whether students in these schools may decline up to two food items (as in senior high schools) or only one item. This discretionary authority is given to local officials because of concerns that have been expressed by State and local school food service officials that allowing younger students to decline two food items lessens the nutritional aspect of the program. School food authorities have, therefore, been given flexibility in determining how offer versus serve will operate in schools below the senior high school level. (NOTE: This discretionary authority is given to the local school food authority only and not to States. States have no option but to see that offer versus serve is implemented in senior high schools and at the option of the local school food authority in schools below the senior high school level.)

IDENTIFYING FOOD ITEMS. A food item under offer versus serve is one of the five required foods within the four components of the school lunch pattern. In order to be able to identify whether a lunch is reimbursable it is necessary to be able to identify the five food items as they appear in a lunch. There are a number of points to remember in identifying food items.

1. A food item is different from a menu item. A menu item is any planned main dish, vegetable or fruit, bread, milk and any "other foods" (foods which do not meet meal requirements but which are served to help round out the lunch) that are named on the menu to be served on a given day. Food items make up menu items. For example, the main dish named on a menu may be a hamburger. The menu item, hamburger, is made up of two

food items: the meat or meat alternate food item and the bread food item.

2. A menu item may contain only one food item or it may contain more than one food item. Common examples of menu items containing more than one food item are pizza, all sandwiches, spaghetti with meat sauce, chef salad, and tacos. Spaghetti with meat sauce, for example, contains three food items: meat and vegetable in the meat sauce, and bread in the spaghetti. Thus, a reimbursable lunch could contain as few as one or two menu items.

3. The meat or meat alternate food item may be split into more than one menu item. This happens when the meat or meat alternate is contained in the main dish and one other menu item. In order for the meat or meat alternate to count as one of the five food items, the student would have to take both the main dish and one other menu item. An example of this is a soup and sandwich lunch in which the soup and sandwich together contain two ounces of meat (perhaps ½ ounce of meat in the soup and 1½ ounces in the sandwich.) For the meat or meat alternate to count as one of the five food items, the student would have to take both the soup and the sandwich. It should be noted, however, that in this situation, if a student takes only one of the menu items the lunch is still reimbursable if it contains at least three full portions of three other food items. For example, a student could take the sandwich, a piece of fruit and milk and have a reimbursable lunch because it contains three full food items--bread in the sandwich, fruit and milk. (A menu planner may want to avoid planning menus with food items split into more than one menu item for the sake of simplicity, or merchandise and serve the two items together to avoid this problem.)

4. To count the vegetable/fruit component as two food items, the total quantity taken by the student must be ½ cup for grades K-3 (if the school is varying portions) and 3/4 cup for grades 4 and over. If the menu contains three ½ cup servings of vegetable/fruit, the student (grades 4 and above) would have to take all three to count as two food items. If the student (grades 4-12) took ½ cup one or two servings, it would count as only one food item.

5. To count the bread food item as one of the three (or four) needed for a reimbursable lunch, a student must take one full serving of bread or bread alternate. Although the planned bread for the day may be more than one serving to meet the 8 per week requirement, this is the minimum quantity which must be offered each day. Therefore, in menus where there may be two different bread/bread alternate menu items which together provide two servings of bread such as spaghetti with Italian bread, the student may take both but must take at least one full serving of either the spaghetti or the Italian bread to count as the bread food item.

6. The three (or four) food items required to make up a reimbursable lunch must be different food items. A second portion of milk or a second piece of pizza, for example, may not count toward the reimbursable lunch.

SUMMARY OF CONDITIONS FOR A REIMBURSABLE LUNCH. In summary, the following requirements must be met in order for a lunch to be reimbursable under offer versus serve:

1. All five required food items of the four food components must be offered (made available) to all students in schools participating in the National School Lunch Program.

2. The quantities of each food item offered must be consistent with the minimum quantities specified by school lunch pattern requirements. The quantity of vegetable and fruits offered must be consistent with the planned serving size for each item.

3. In senior high schools, a student must take full portions of at least three of the five required food items.

4. In schools below the senior high school level in which the local school food authority has opted to implement offer versus serve, a student must take full portions of three or four of the required food items, as determined by the local school food authority.

5. When a student in any school implementing offer versus serve has declined a full portion of an item, the school may offer a smaller portion of the item. (This is at the discretion of the local school food authority.) This smaller portion does not count as one of the required food items.

PRICING THE REIMBURSABLE LUNCH. The National School Lunch Act requires that the lunch be priced as a unit. This means that the paying student will pay the full lunch price and the student eligible for reduced prices will pay the current reduced price charge (and the student eligible for a free lunch will pay nothing) whether the student takes the minimum number of food items (three or four) or all five food items offered. The intent of this requirement is to maintain incentives and encouragement for students to take all five items.

If required food items are available to students as a la carte items, pricing of these items should not compete with the unit price of the reimbursable meal. Should the individual pricing of a la carte items result in three of the five required items being sold at less or more than the unit price, this would not be in compliance with regulations. Therefore the meal could not be claimed as a reimbursable meal. For example, if a hamburger on bun and milk are sold for 70 cents at a la carte prices when the meal unit price is 90 cents, then this should not be claimed as a reimbursable meal. If the same meal at a la carte prices totaled $1.00, this would be more than the unit price, thus the meal could not be claimed for reimbursement if sold for $1.00.

OTHER IMPORTANT CONSIDERATIONS.

1. If the option for offer versus serve is implemented, school officials can not determine which of the five food items are to be taken or declined. When the provision is properly implemented, students may decline any one or two of the five required items. Restricting the offer versus serve provision to certain items, such as milk or a vegetable, is not in compliance with the regulations.

2. If a junior high, middle, or elementary school is implementing offer versus serve for the first time, the collection procedure should be reviewed to determine if changes will be necessary to assure that meals taken by the students are reimbursable. Some collection procedures, such as teacher collecting in homeroom, must be adapted so that someone is responsible for monitoring at the end of the serving line.

3. The decision to implement the offer versus serve provision is the option of each school food authority. The school food authority may decide that all schools follow the same option or that each school administrator may select the option which best suits the needs of the individual school. Should a school administrator wish to implement offer versus serve for only designated grades, this is also an option which can be selected. For instance, a principal may choose to allow grades 4-6 to participate in offer versus serve while grades K-3 will be served all five required items. One important consideration in choosing this option is scheduling when each grade will be coming to the lunchroom.

4. Each district is required to complete a Declaration of Intent Form and choose one option regarding the implementation of offer versus serve. This form is considered a part of the food service agreement and schools will be reviewed and audited against the option chosen.

Menu Planning for Offer versus Serve

STUDENT ACCEPTANCE. Planning menus in schools implementing offer versus serve requires some special care. Not only must lunches be planned to meet meal requirements, but school food service managers must strive to provide acceptable meals that students will want to eat. Their goal should be to plan a lunch each day in which each menu item is acceptable to students so that students will want to consume the full lunch. Only then will students receive the full nutritional value of the lunch offered to them.

To achieve this goal, managers must know the preferences of their student customers. Having student tasting parties and having students help plan menus are two ways to learn students' tastes. Another way is to review past food production records each time menus are planned to observe student acceptance of each menu item. If, over time, a manager observes certain items are unpopular, the manager should substitute more popular foods for these items, determine if the recipe needs a revision, or if the brand of a processed product needs to be changed.

OFFERING CHOICES. Extra consideration should also be given to offering choices, even though this is not mandatory. Offering choices recognizes the fact that not all students have the same tastes, and it gives students more of an opportunity to select foods they will eat. It also increases the chances that students will select the full lunch. Many managers have found that implementing offer versus serve is much easier and more successful when choices are offered. Offering choices can also be a factor in cost control. See Appendix, page 45.

Elementary school managers may want to consider offering a limited number of choices within a few food components since young children are just learning to make food choices. The vegetable/fruit component is a good place to start offering choices because of the high waste factor with this component. In secondary schools, more extensive choices could be offered: a sandwich lunch, a hot lunch or a salad bar lunch, along with choice within the components of each. All in all, offering choices means increased customer satisfaction and less food waste. With careful planning and efficient management, it need not mean an increase in operating costs, but can also be operational cost containment, particularly when a balance of purchased and commodity foods are used.

SOME PRACTICAL MENU PLANNING TIPS. Here are some suggestions to help simplify serving time and help assure that students will take meals that meet minimum requirements. (They will also help minimize cashier errors in identifying a reimbursable meal.)

1. Although by regulation the meat or meat alternate may be served in the main dish or in the main dish and one other menu item, plan for the main dish to contain the full meat or meat alternate. If a menu is occasionally planned in which the meat or meat alternate is split into two menu items, like a soup and sandwich combination, merchandise and serve the two menu items together.

2. Plan only full servings of bread or bread alternate. If there are two menu items containing bread, be sure each menu item contains a full serving of bread.

3. Plan three or more choices of fruits and vegetables in equal, standard serving sizes (¼ cup servings for grades K-3 and 3/8 or ½ cup servings for grades 4 and above) from which students can select two. See Appendix for procedures to convert ¼ cup servings of vegetables and fruits in the Food Buying Guide for School Food Service to 3/8 cup servings.

4. Plan larger portions of fruits, raw vegetables, and potatoes and smaller portions of cooked vegetables since studies indicate there is higher consumption of fruits, raw vegetables, and potatoes than of cooked vegetables.

5. Consider using cycle menus. Since cycle menus repeat themselves, they can be a definite advantage in schools implementing offer versus serve to make forecasting more accurate. Some flexibility will be necessary, however, to allow for use of commodities, delivery delays, or other unforeseen problems.

Production Planning for Offer versus Serve

FOOD PRODUCTION RECORDS. Since reducing food waste is one of the goals of offer versus serve, care must be taken to assure that reduced food waste resulting from students taking only what they intend to eat doesn't become production waste resulting from overproduction. To accurately plan production for offer versus serve, accurate daily records of food production for each menu item served are important. The food production record should show the quantities of foods planned, prepared, and leftover each time the menu is served. It should also include other pertinent information about the day's production like overproduction due to a class field trip for which the manager wasn't notified and comments on student acceptance of each menu item. These records then become a valuable planning tool since they contain history which can be used to forecast--to plan the amounts of each menu item to prepare the next time that menu item is served.

The first few times a menu is served (before trends are established and there is any "history" to refer to) all that managers can do is make educated guesses about how much of each menu item to prepare. Concerns about running out of food, preparing much more than is needed, and cost overruns are certainly legitimate concerns. There is no doubt that errors will be made at first, and managers should look at these trials as learning experiences while keeping accurate food production records. As experience is gained, and as managers get to know their customers, it will be surprising to see how much precision can be gained at forecasting production needs using food production records. They will also probably start seeing some cost savings. In an informal national survey of elementary school managers, a majority felt that food costs were reduced by four or five cents per meal when offer versus serve was implemented.

FORECASTING AMOUNTS TO PREPARE. In planning production for lunches served in schools implementing offer versus serve, managers must be sure that enough of each menu item can be prepared so that each student is offered the complete lunch. This does not mean, however, that food must be prepared in quantities in excess to what students will actually take so that large amounts are left over. It does mean that, based on past history as recorded on food production records, the manager should forecast as accurately as possible the quantities of each item that will be consumed. In schools not implementing offer versus serve, managers must prepare enough to serve each person the required amount of each food item. In offer versus serve schools, this may not happen very often.

In planning how much of each menu item to prepare, the manager should examine the production records from the past when a particular menu was served. She should note how much of each menu item was prepared, how much was actually served, how much was left over, and any comments that were made about the production and student acceptance each time the menu was served. Taking into account the number of students she plans to serve, she should be able to forecast how much of each food item will be needed. Accurately recording leftovers and writing comments on the production record are vitally important to provide information for food production the next time a menu or particular food item is served.

When the same menu or combination of menu items is served each time, the manager should be able to more accurately predict the amount needed. If there is a change in food items within the menu, the manager may need to adjust the quantities accordingly. For example, if it is necessary to change the vegetable in a menu from green beans to kale, the manager may plan to prepare a lesser amount since kale is usually less acceptable than green beans.

Another problem which causes student dissatisfaction is running out of menu items that students expect to be available on the serving line. If this happens, the manager should be sure to substitute a food item that is equal to and as readily acceptable as the one for which the substitution is being made. It is best to always substitute vegetable for vegetable, fruit for fruit, or meat/meat alternate for meat/meat alternate. If it becomes necessary to make substitutions, the manager must always be sure that all five required food items are offered and available to all students. For example, potato chips should never be substituted for french fries because they cannot be credited as a vegetable. When there is a food item shortage, the person making the substitution should be sure to document on the production record the substitution made. This will help in forecasting the amount to prepare the next time a menu item is served and may help to prevent a shortage from occurring in the future.

Making Offer Versus Serve Work

IMPLEMENTING OFFER VERSUS SERVE. Although the following suggestions are made primarily for those who are just beginning to implement offer versus serve, they can be used to enhance those programs which have already implemented offer versus serve in their school food service programs. Probably the most important factor determining the success of offer versus serve is an attitude of cooperation among principals and administrators, teachers, and food service staff. Teachers, parents, and students will need to be informed; students may need help in making wise food choices; and steps will need to be taken to prevent serving lines from slowing down. Even though students may refuse one or two of the required five food items offered, food service employees should encourage students to take the entire lunch since only then do they receive the full nutritional benefit.

Step 1--Gain the support of the principal. He/she needs to have a good understanding of what offer versus serve is all about and why it is a good thing to implement in his/her school. The principal needs to be assured the manager has everything under control and that, although there will be a time of transition as servers, cashiers, and students adjust to the change, the outcome will be positive--less food waste, possibly lower food costs, and hopefully a lesson for students on how to make wise food choices.

Step 2--Inform parents and teachers. They, too, need to understand offer versus serve so that they can help elementary-age students make wise food choices. These young students are just developing their food habits and they will need help in making their decisions. Ideally, this should be a shared responsibility among parents, teachers, the school administrators, and the food service staff. Parents could be informed by sending a letter home, by an article in a local newspaper or through a presentation at a PTA meeting. Teachers could be informed through a presentation by the food service manager at a teachers' staff meeting or by distributing an information sheet to teachers.

Step 3--Inform students. The principal and the food service manager should work cooperatively to inform students about the offer versus serve provision. Visiting individual classrooms, explaining the provision, and giving students an opportunity to ask questions is probably the ideal way to inform students. Food service workers should thoroughly understand offer versus serve to be able to verbally explain the new serving method as students become familiar with it. Signs in the cafeteria and/or on the serving line could also be a way to inform students of the new choices.

Step 4--Make necessary adjustments in the food service operation. The next step is for the manager to consider the implications of implementing offer versus serve on her food service operation. Special consideration should be given to planning menus with choices that are highly acceptable to students, keeping accurate food production records to be able to forecast production accurately, and merchandising the lunch to encourage students to receive the full nutritional benefit available.

Step 5--Anticipate potential problems in the serving line, like slow-moving lines while students and food service workers adjust to the new system. Here are some possible solutions to that potential problem: 1) Individually portion as many menu items as possible so that the student can quickly pick up the menu item he wants without the server having to ask and then dish it onto a plate. 2) Arrange to have the menu announced over the public address system each day and encourage students to think about what they would like before getting to the cafeteria. 3) Make signs or encourage the art teacher to have students make signs to hang in the cafeteria, communicating the new offer versus serve serving method. 4) Use stars, flags, signs, numbers, colors, or some other image to designate the five food items from which a student may choose three (or four). 5) Use buffet service. 6) Use both sides of a serving line for customer self-service. 7) Solicit other ideas from the food service staff, teachers or student groups on how to keep serving lines moving.

Step 6--Train the school food service staff about the changes in the operation that will result from the implementation of offer versus serve. Cashiers and servers will especially need to be trained to recognize a reimbursable lunch under offer versus serve.

Step 7--Assess efforts. After a period of transition, the manager should assess the situation, then continue to assess it periodically.

In assessing efforts, the manager should ask the following questions:

1. Have students learned the new serving method? Are they making wise food choices? Do students need more help in making choices?

2. Are many students taking all 5 food items? What foods are students turning down? Can adjustments be made in menus to encourage better student acceptance? Can merchandising be improved?

3. What has been the effect on plate waste?

4. Are quantities needed for each menu item being forecasted accurately so that there is minimal production waste?

5. What has been the effect on food costs?

6. Have servers adjusted to the new serving method? Are they serving as efficiently as possible?

7. Have cashiers learned to quickly identify a reimbursable lunch?

8. Are serving lines moving adequately fast? Can further steps be taken to speed them up if necessary?

9. Is the principal happy about the results of the change? Parents? Teachers? Food service staff?

The answers to these questions should dictate what changes need to be made.

Step 8-- Have confidence that offer versus serve, once in full swing, will work and will help reduce food waste and food costs! Be patient during the transition!

It is obvious that there will be challenges encountered with offer versus serve, especially in elementary schools where there is a need to teach children how to make wise food choices, and in the planning of menus and production in all schools. However, with careful planning and management and with the cooperation of principals, teachers, and parents, offer versus serve has and can continue to reduce food waste and food costs while encouraging students to consume a variety of nutritious foods.

ACTIVITY 1

True-False

Read each statement and circle T if the statement is true or F if the statement is false.

T F 1. All schools participating in the NSLP have the option to implement the offer versus serve provision.

T F 2. In schools where offer versus serve has been implemented, full paying students selecting less than the complete lunch may pay a reduced price.

T F 3. The manager in a school implementing offer versus serve now has the option to offer only three food items to meet the lunch pattern requirements.

T F 4. The offer versus serve provision does not affect the School Breakfast Program.

T F 5. If the meat/meat alternate requirement is split into two menu items, such as fish and macaroni/cheese, the manager may allow a student to take only one of the items offered and count it as one of the three required food items.

T F 6. Under offer versus serve, milk is required to be taken.

T F 7. A student can select a second serving of any one food item to count towards meeting his obligation to choose three required food items.

T F 8. If a high school student selects two (or more) servings of vegetable and fruit, the quantities must total 3/4 cup to be credited as two food items in a reimbursable lunch.

T F 9. Schools may offer tasting portions of food items but this is not required.

T F 10. In an elementary school, offer versus serve may be implemented for students in grades 4-6 while students in grades K-3 are required to take all five required items.

ACTIVITY 2

EXERCISES IN IDENTIFYING A REIMBURSABLE LUNCH

MENU	STUDENT TAKES:	REIMBURSABLE LUNCH? (3 of 5)
#1 Baked Chicken (2 oz meat) Whipped Potatoes (½ cup) Green Beans (½ cup) or Broccoli (½ cup) Hot Roll (1 serving) Milk (½ pint)	Chicken Roll Milk	Yes _____ No _____ Why? _____
#2 Spaghetti with Meat Sauce (2 oz meat, ½ cup vegetable, ½ cup spaghetti) Tossed Salad (½ cup) Apple juice (½ cup) French Bread (1 serving) Milk (½ pint)	Spaghetti with Meat Sauce Juice	Yes _____ No _____ Why? _____
#3 Vegetable and Beef Soup (½ cup vegetable, 1 oz meat) Peanut Butter Sandwich (1 oz meat alternate, 2 servings bread) Fresh Fruit (½ cup) Milk (½ pint)	Peanut Butter Sandwich 2 Milks	Yes _____ No _____ Why? _____
#4 Hamburger or Fishburger on Bun (2 oz cooked meat, 2 servings bread) French Fries (½ cup) Cole Slaw (½ cup) or Sliced Tomato and Lettuce (½ cup) Milk (½ pint) Iced Tea (1 cup)	Hamburger French Fries Iced Tea	Yes _____ No _____ Why? _____
#5 Cheese Pizza (2 oz cheese, 2 servings bread) Tossed Salad (½ cup) Applesauce (½ cup) Milk (½ pint) Molasses Cookie (1)	Cheese Pizza Milk Molasses Cookie	Yes _____ No _____ Why? _____

Activity 3

Use the food items below to plan five different reimbursable meals under the offer versus provision.

Hamburger/bun
Chili dog/bun
Tater tots
Garden salad
Peaches
Cole slaw
Potato Chips
Peanuts
Chicken noodle soup
Jello

Spaghetti w/meat sauce
Garden salad
Fruit cup
Peanut butter cookie
Milk
Iced tea
French bread
Rice
Macaroni/cheese

MEAL PATTERN MONITORING

Introduction and Background

"Meal Pattern Monitoring" sounds like another bureaucratic term for more work; however, it is only a different perspective on an old problem. In the past it has been the practice to add up total amounts of food within a component, divide by the number eating to determine if meal pattern quantities were met. This procedure will still work for schools not implementing offer vs. serve and not offering choices, but those schools which are implementing offer vs. serve and/or offering choices needed a new approach. Adding the total amounts prepared by the number eating in offer vs. serve obviously will not work since everyone is not required to take all 5 items and when offering choices amounts prepared or planned may not reflect the actual number eating. What was needed was a method for determining if individual servings actually provide what was planned to meet the meal pattern. For example, if chili is planned to provide 1½ ounces of meat with a ½ ounce cheese stick to meet the 2 ounce requirement does the serving size and yield of the recipe used for the chili actually provide 1½ ounces of meat/meat alternate and was there enough cheese to supplement the chili? The procedure developed is one which can be used by schools to determine if a recipe meets the portion size planned and will be used by state consultants to determine if meals meet requirements.

This method of looking at meal production is basically a change from reviewing requirements after a meal is served to when it is planned. This can help in planning, preparing and serving meals. This is also a change from total quantity monitoring to monitoring for individual serving sizes. The primary emphasis of this procedure is to determine - prior to service - the amount of meat/meat alternate available (in an individual serving) to meet the meal pattern requirements; however, it can also be used for the vegetable/fruit component. This is especially helpful when planning combination dishes, choices within a component, and meals in which the meat/meat alternate is contained in the main dish plus one other menu item.

For a combination dish it is vital that the amount of meat/meat alternate or vegetables be known so that it can be accurately credited and supplemented, if necessary, to meet the meal pattern. A combination dish is one in which there are ingredients other than the one which meets the planned component or has more than one component in it. Examples of this are:

1. Chili
2. Bar-b-cue
3. Tacos
4. Lasagna
5. School-made chicken noodle soup
6. Macaroni and cheese
7. Broccoli casserole

A school which offers choices must be aware of the amount of meat/meat alternate or vegetable in one serving of any dish. This is important in all programs but especially in programs which are participating in offer vs. serve since a pupil who goes through the line must be able to select five items which meet the meal pattern requirements. When offering choices managers must be aware of the contribution to the meal pattern that each choice makes to insure that only reimbursable meals are claimed for reimbursement (see activity #5).

If the meat/meat alternate component is split between two dishes it is important to know how much of the component is contained in each dish to insure that the component requirement is met.

The Procedure

The procedure to insure that an individual serving meets the planned serving and meal pattern requirements varies for the instances stated but the basic premise is as follows:

1. Determine how many servings of any one dish are planned.

2. How much of the planned component is to be prepared?

3. Multiply the amount of a component to be prepared by the yield as given in the Food Buying Guide.

4. Divide the total yield by the number of servings planned to determine the contribution to the meal pattern that each serving provides.

An oversimplified example of this would be:

1. Planned - 400 hamburgers.

2. Amount of ground beef - 55 lbs. - to be made into 400 hamburgers.

3. 55 lbs. (to be prepared) x 11.6 oz. (1 oz. yields as shown in the Food Buying Guide) = 638 1 oz. servings available

4. 638 oz. ÷ 400 hamburgers = 1.59 oz. per hamburger.

These hamburgers would each be short and to serve them to meet the 2 oz. requirement you would need to supplement them with ½ oz. of cheese or approximately 1 tablespoon of peanut butter.

Combination Dishes

For a combination dish it is important to know the yield of the recipe, and the planned contribution to the meal pattern. Following is a recipe for chicken tetrazzini and the method used to figure the contribution to the meal.

CHICKEN TETRAZZINI

50 Servings — Bake in 375° oven

INGREDIENTS	WEIGHTS	MEASURES
Spaghetti	3 pounds	
Chicken or turkey, cooked, diced	5 pounds	
Pimento, chopped	6 ounces	
Parsley, chopped		2 Tablespoons
Onions, chopped	6 ounces	
Butter or margarine	12 ounces	
Garlic powder to taste,		1 teaspoon
Cream of mushroom or chicken soup	2 - 46 ounce cans	
Milk	46 ounces	
Cheddar or mozzarella cheese, shredded	2 pounds	

DIRECTIONS:

1. Cook spaghetti and drain.
2. Mix chicken, pimento, and parsley together.
3. Cook onion in butter until tender. Add garlic powder if desired. Add soup and milk, blend, and heat thoroughly. Combine sauce, chicken, and spaghetti. Divide equally in to 2 - 12 x 20 x 2 inch baking pans.
4. Sprinkle one pound of cheese over top of each pan and bake for 30 minutes at 375°F. 25 servings per pan.

Meat/meat alternate

1. Recipe-planned servings - 50

2. Chicken or turkey - cooked - 5 lbs.
   Cheese 2 lbs.

3. 5 lbs. chicken x 16 (1 oz. servings - already cooked) = 80 1 oz. servings
   2 lbs. cheese x 16 (1 oz. servings) = 32 1 oz. servings
   80 + 32 = 112 oz. of meat/meat alternate

4. Divide into 2 pans - 25 servings per pan
   112 (1 oz. servings) ÷ 50 servings = 2.24 oz. per serving.

Bread/bread alternate

1. 50 servings.

2. Spaghetti - 3 lbs.

3. 3 lbs. spaghetti x 16.5 (½ c. - 1 bread serving) = 49.5 ½ cups.

4. 49.5 ÷ 50 = .99 bread servings or 1 bread serving.

This recipe provides 2.24 oz. of meat/meat alternate and 1 bread serving per serving.
For recipes which are used frequently this only needs to be done once and attached to or noted on the recipes. This should be done for all recipes when first used to determine the accurate contribution, including the USDA recipe cards since the yields given there are based on the out-dated Food Buying Guide.

Offering Choices

When offering choices within a component it is necessary to know the contribution an individual serving of any dish will provide. Below is a method to determine this.

Meat/Meat Alternate
Chicken Tetrazzini choice
Hamburger

1. Chicken tetrazzini - recipe given previously shows each serving has 2.24 oz. of meat/meat alternate. If you look at past production records indicating the same or like choices you can determine the approximate number of servings needed and divide by the recipe yield to determine how many times to increase the recipe. Example of the production record on page 19 shows that the last time these two items were served the recipe for chicken tetrazzini was quadrupled (yield total-200 servings) but that 3 pans were left over (appoximately 75 servings); therefore, approximately 125 portions were actually served.

    1. Chicken tetrazzini - yield 50 x 4 = 200 servings.
    2. 3 (pans left over) x 25 (servings per pan) = 75 servings.
    3. 200 (servings prepared) - 75 (servings left over) = 125 portions served.
    4. 125 served ÷ 50 (yield per recipe) = 2.5 or 3 (number of times to increase recipe).

2. Hamburgers - After checking the production record as described above, it was determined that approximately 300 students would take hamburgers. To assure that each hamburger would meet the 2 oz. requirement, the formula as given in past training sessions can be used.

    A. 300 students x 2 oz. (cooked yield needed per hamburger) = 600 1 oz. servings.

    B. 600 (1 oz. servings needed) ÷ 11.6 (1 oz. servings per 1 lb. commodity ground beef as given in the Food Buying Guide) = 51.72 lbs. or 52 lbs. of hamburger needed to prepare 600 2 oz. yield hamburgers.

Basically, you must determine the individual yield of each serving for all choices. This is much more logical and helpful than adding up all the protein in all choices and dividing by the total served.

LUNCH MENU & PRODUCTION RECORD

DATE: March 10

MENU:
Hamburger w/Bun
Chicken Tetrazzini
Tossed Salad
French Fries
Corn

	GRADES	NUMBER PLANNED	NUMBER SERVED
GROUP III	(K-3)		
GROUP IV	(4-12)	450	401
GROUP V	(7-12)		
ADULT/Misc/Ala Carte		40	20
TOTAL		490	421

1/2 pint milk required for each reimbursable lunch except where offer vs. serve applies.
*Group IV portions may be served to all students.

COMPONENTS	FOODS USED	PORTIONS PLANNED III	IV	V	AMT. PREPARED	AMT. LEFTOVER (Comments)
MEAT/MEAT ALT. Group III 1 1/2 oz. *Group IV 2 oz. Group V 3 oz. recommended	Ground Beef commodity		2 oz cooked 1 hamburger		60 lbs. (345 hamburgers prepared)	48 burgers leftover
	Chicken - leftover from 3-4-83		2 oz in 1 casserole		20 lbs. (left over)	3 pans leftover
	Cheese		25 servings to a pan		8 lbs.	
VEG./FRUIT (2 or more) Group III 1/2 c. *Group IV 3/4 c. Group V 3/4 c.	Lettuce, carrots, celery, tomato — Tossed Salad		1/2 C.		30 lbs. 1 lb. 1 lb. 2 lbs.	
	French Fries		1/2 C.		10-5 lb. pkgs.	
	Corn		1/4 C.		10-#10 cns.	
BREAD/BREAD ALTERNATE *Group III & IV 8 per week required Group V 10 recommended	Spaghetti		1/2 c.		12 lbs.	
	Hamburger Buns		1 each		345	48
OTHER FOODS						

Above data is required by federal regulations. Use of this form is not mandatory if school food authority has an alternative form for documenting above information.

Split Component

If the meat/meat alternate component is split between two menu items it is absolutely necessary to know how much of the requirement is contained in both menu items. Example: To meet the 2 oz. requirement fish and macaroni and cheese are planned.

Fish - 3 oz. battered portion = 1.1 oz. edible portion. To complete the 2 oz. meat/meat alternate requirement, .9 oz. of cheese is needed in each serving of macaroni and cheese.

The recipe for macaroni and cheese follows along with the analysis to determine how much meat/meat alternate is in each serving.

MACARONI AND CHEESE

100 servings		½ cup each
Macaroni	3 lb. 12 oz.	
Boiling water	3 3/4 gal.	
Salt	2 oz.	
Butter	6 oz.	(3/4 cup)
All purpose flour		1½ c.
Salt		¼ c.
Hot Milk	2 gal.	
Dry Mustard		2 2/3 Tbsp.
Cheese - shredded	5 lbs.	

DIRECTIONS:

1. Cook macaroni - drain.
2. Melt butter, blend in flour and salt. Stir in milk. Cook and stir constantly until thickened.
3. Add mustard and cheese to sauce; stir until thickened.
4. Combine macaroni and cheese sauce.
5. Pour into 3 greased baking pans.
6. Bake at 350°F - 50 minutes.

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1. 100 servings - ½ cup
2. cheese - 5 lbs.
3. 5 lbs. cheese x 16 (1 oz. servings per lb.) = 80 1 oz. servings
4. 80 (1 oz. servings available) ÷ 100 (servings per recipe) = .8 oz. per serving.

This would be short since it takes .9 oz. to supplement the fish portion. To meet the requirement, 6 lbs. of cheese would be necessary. 6 lbs. x 16 oz. = 96 1 oz. portions. 96 ÷ 100 servings = .96 oz. per serving.

Additionally, if 160 fish portions are served to meet the 2 oz. requirement 160 ½ c. servings of macaroni and cheese must also be served. If either the fish portion or the macaroni and cheese are served separately neither would provide enough meat/meat alternate to meet the requirement.

Vegetables

After discussing all of these ways to determine the individual portion contribution for the meat/meat alternate, it is important to mention that vegetables can be done the same way; however this would probably be the exception to the rule. Generally, your utensils will insure that the planned serving size is met for each individual portion. For those combination dishes served as part of the vegetable component, the procedure would be the same as shown for the chicken tetrazzini.

Example: Squash Casserole (could use zucchini)

100 servings — Bake in 350° oven

INGREDIENTS	WEIGHTS	MEASURES
Squash, fresh or frozen		50 medium (25 lbs)
Salt		to taste
Sugar, white		2 Tablespoons
Margarine, melted		12 Tablespoons
Salt		1½ teaspoons
Flour		1½ cups
Milk		3 qt
Pepper		2 teaspoons
Onions, chopped	2 lbs	
Cheese, shredded	3 lbs	
Cracker crumbs		3 qt

1. Cut squash into ½-inch slices (if using fresh).
2. Cook in boiling salted water with sugar for 15 minutes.
3. Combine margarine, salt and flour.
4. Stir in milk gradually. Heat over medium heat, stirring constantly until sauce thickens.
5. Place ½ of squash slices in two baking pans.
6. Layer with ½ of pepper, onions, cheese and sauce.
7. Sprinkle with ½ of the cracker crumbs. Repeat layers.
8. Bake at 350°F for 30 minutes.

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1. 100 servings.

2. Squash - 25 lbs., onions - 2 lbs.

3. 25 lbs. frozen squash x 7.96 (¼c. vegetable) = 199.0 ¼ cups.
   2 lbs. onions x 7.91 (¼c. vegetable) = 15.8
   Total ¼ cups 214.8

4. 214.8 (¼ cups vegetable in recipe) ÷ 100 (servings in recipe) = 2.15 (¼ cups of vegetable per serving). Recipe yields 100 ½ cups vegetable servings.

5. Each pan would yield 50 individual servings which provide a ½ cup vegetable component. Portion size may not be ½ cup because of other ingredients in the recipe.

Portion Control

This method for determining whether individual servings meet the planned contribution to the meal pattern puts added emphasis on menu planning and portion control. You must be very careful that those on the serving line know what the planned serving is so that it will be served to meet the contribution as planned. If the planned serving size of chili is 1 cup and it provides 1½ oz. of meat/meat alternate it must be served in 1 cup portions. Servings of only 3/4 cup would only provide 1.12 oz. of meat/meat alternate. Even when supplemented by a planned serving of .5 oz of grated cheese this component would only provide 1.62 oz. of meat/meat alternate. When consultants from the Department of Education review your program they will not only determine if the meal was planned to meet meal pattern requirements, but they will also observe the meal service to make sure that it is being served as planned. If you planned for 250 one cup servings of chili and you serve 300 then the consultant will take a closer look at your production records since it is very probable that each bowl of chili served was short and if counted as a component could be a non-reimbursable meal.

While this is a new method of looking at meals, it should make menu planning easier especially if you are using standardized recipes. If you are not currently using written recipes consistently, perhaps this view of the meal pattern will help you understand the importance of writing down your recipes for consistent results.

ACTIVITY 4

Below is a recipe for lasagna - determine what the planned contribution to the meal pattern this recipe would provide. Food Buying Guide information is in Appendix page 47.

QUICK & EASY LASAGNA CASSEROLE

100 Servings — Bake in 375° oven

INGREDIENTS	WEIGHTS	MEASURES
Onions, chopped		1 cup
Tomato paste		1 #10 can
Salt		½ cup
Sugar		6 Tablespoons
Garlic powder		1 Tablespoon
Lasagna noodles	6 pounds	
Cheese, cheddar, grated	4 pounds	
Tomatoes, crushed	1 #10 can	
Water		2 gallons
Pepper		1 teaspoon
Oregano		¼ cup
Ground beef	7 pounds	
Cheese, mozzarella, Grated	4 pounds	

DIRECTIONS:

1. Mix onions, tomato products, water, salt, pepper, sugar, oregano and garlic. Refrigerate 24 hours in stainless steel pans to blend spices.
2. Brown meat and drain off fat. Add to tomato sauce.
3. Oil 4 pans. Pour 1 quart of meat sauce in each 12 x 20 x 2 pan.
4. Cover meat sauce with layer of uncooked lasagna noodles. Pour 1 quart meat sauce over noodles. Sprinkle 2 cups cheese on meat sauce. Repeat with layer of noodles, meat sauce and cheese.
5. Cover with wax paper and foil. Bake 375°F for 1 hour.
6. Let stand for 15 minutes before removing foil. 25 servings per pan.

NOTE: Use FBG information for market style ground beef (30% fat).

ACTIVITY 5

Discuss the following menus and how they could be improved.

Menu item	Contribution to the meal
1 cup chicken noodle soup with chicken added	1 oz. meat/meat alternate
or	
1 cup tomato soup	¼ cup vegetable
Grilled cheese sandwich	1 oz. meat/meat alternate
or	2 servings bread
Peanut butter & Jelly sandwich	1½ oz. meat/meat alternate 2 servings bread
French Fries	½ cup vegetable
Slaw	¼ cup vegetable
Milk	
Tea	

Question: If a child goes through the line with a grilled cheese sandwich, tomato soup, and tea would this meal be reimbursable? Why? When?

Menu item	Contribution
Fish Sandwich	1.1 oz. meat/meat alternate
and	2 bread servings
Macaroni and Cheese	1 oz.meat/meat alternate 1 bread serving
Peas	¼ cup vegetable
Mashed Potatoes	¼ cup vegetable
Diced Pears	¼ cup vegetable
Milk	
Tea	

Question: If a student takes a fish sandwich, peas, and pears, would this be a reimbursable meal? Why? When?

ACTIVITY 6

Menu items	Amount prepared	Contribution planned
Chili dog on bun		
1-2 oz. hot dog on bun	50 lbs.	1½ bread serving 2 oz. meat/meat alternate
½ cup chili	40 lbs. ground beef	3/4 oz. meat/meat alternate

This is a meal which was served in a school not implementing offer vs. serve.

541 PEOPLE SERVED.

hot dogs - 50 lbs. x 16 = 800 1 oz. servings
ground beef - 40 lbs. x 11.2 = 448 1 oz. servings
Total meat/meat alternate - 1248 1 oz. servings

1. What is wrong with this component?
   A. How many oz. of meat/meat alternate are needed? _____
   B. Was this component short? ____ Yes ____ No
   C. What is wrong with this?

Part II

PUBLIC RELATIONS

MERCHANDISING ON THE SERVING LINE

TYPES OF FOOD SERVICE

TIME MANAGEMENT

PUBLIC RELATIONS

Public Relations for school food service personnel can be defined as that part of each employee's job which makes their customers want to come back. Assuming that every possible effort is made to produce a first quality product in the kitchen every day, there are still other things which affect the attitude of your customers. It is these "other things" which have been grouped together and called Public Relations. It may be as simple as smiling at the students as they go through the line or as sophisticated as well-trained student committees formed to help plan menus. Remember though, all the public relations in the world cannot overcome poor menus or poorly prepared meals!

Following are a few practical ideas and suggestions which can be used to keep your customers informed, happy, and most importantly, coming back. These are just suggestions, and it must be remembered that your individual school and its administrators must be taken into consideration when planning a public relations program for your cafeteria.

1. One of the main ingredients in a happy cafeteria is the attitude of the workers. Do you like your customers? Are you proud of the meals you are serving? Hopefully, the answer to both of these is yes. If so, show it! Get to know your customers, smile at them, say something nice, encourage them to try something different. Breakfast and lunch should be highlights of a student's day. A time for them to relax and prepare for the work ahead. The mood of the "lunchroom ladies" rubs off--if you seem happy and enthusiastic about your meals, they will also.

2. To be successful, any public relations program must consider the customers' likes and dislikes about the meals they are served. There are several ways this can be done. Two ways to provide these answers are: (1) Take a survey of students' likes and dislikes. You may also wish to have your teachers and staff take this survey, or (2) Organize a committee of students, parents, and staff to advise you of the likes and dislikes of your customers. Remember, these are just the first steps. Implementing the ideas and suggestions of your customers is important to improve your program!

3. A very important part of a public relations program is good communication, education, and understanding. Your customers need to know that although you would like to serve them only things they like, you have a responsibility to serve them nutritious meals and to encourage good eating habits. The best way to do this is to talk to various groups and organizations within your school. Some of these groups could be: (1) Student Government; (2) The Home Economics Club or Future Farmers; (3) The scouting, 4-H, campfire, etc., clubs which serve your school; and, (4) Your Parent-Teachers' Organizations. It is important for the parents and teachers to understand the regulations you must meet and the goals you are trying to attain so that they will also encourage students to eat.

4. Most schools have a student newspaper. This is one tool which can be used in many different ways to generate interest in your meals. Some things you could do with the student newspaper are:

   (a) Place a welcome back to school ad in the first issue and ask the newspaper to run an article about the cafeteria.

   (b) Use the newspaper to run a contest to name a favorite meal or plan a good menu, etc.

   (c) Use the newspaper to help introduce a new product.

   (d) Run a student cafeteria survey in the newspaper.

   If encouraged to become involved in your program, the student newspaper can become one of your best promoters.

5. To generate enthusiasm and excitement in your program plan special occasion activities. A few examples could be:

   (a) A birthday party once a month for those born anytime that month.

   (b) Special holiday menus. You might want to issue special invitations to parents or grandparents to eat with the students at these meals.

   (c) A special meal including dishes from a country which one of the language, geography, history, etc., classes is studying.

   (d) Have a special treat for homerooms which have the highest attendance for a week or grading period.

   (e) Celebrate National School Lunch Week with special activities planned for each day of the week including serving the NSL week menu one day.

   (f) Plan a special meal for the football, basketball, hockey, golf, etc., teams if they are going to the district or state tournaments.

   Be involved in your school and participate when something special happens!

6. Look around the cafeteria. Is it as pleasant and enjoyable as possible? First of all make sure it is always as clean as you can keep it. Then consider the following: (1) Are the walls a bright, cheerful color? If not, discuss painting them with your principal; (2) Perhaps you could get the art class to paint a mural on one wall with the school's nickname and mascot or other school symbols or a bright mural depicting the four basic food groups; (3) Sponsor a poster contest during National School Lunch Week and display the posters in the cafeteria; or (4) Do you have nice bright windows with ledges? Ask a science or biology class to try growing plants to study in your windows.

These are just a few ideas you might try. When talking to your student groups, teachers, or parents, ask them for their ideas. Involvement of students and staff in the cafeteria as a learning or enjoyable experience can generate interest in nutrition, improve participation, and instill pride in the cafeteria.

Public Relations, then, means doing all you can, within the requirements you must meet, to make breakfast and lunch times of fun, learning, and good food for the students of your school. You have a good program--encourage everyone to enjoy it!

ACTIVITY 7

PUBLIC RELATIONS INVENTORY

		CIRCLE YOUR ANSWER	
1.	Does your school or district provide public relations workshops for lunchroom personnel?	YES	NO
2.	Do you read your school handbook for students and parents?	YES	NO
3.	Do you understand the school or district policies on discipline, snow schedule, etc.?	YES	NO
4.	Do you read your school newspaper for students or newsletter for parents?	YES	NO
5.	Do you offer suggestions from the lunchroom for articles in the school newsletter for parents and students?	YES	NO
6.	Do you compliment teachers and students when they have been recognized for doing a good job?	YES	NO
7.	Do you make at least one explanation each year of your lunch program and problems at your school building staff meetings and to the students in an assembly program or in small groups?	YES	NO
8.	Do you share your concerns with the school principal?	YES	NO
9.	Do you greet everyone (teachers, students, visitors, and new students) as they come through the lunch line with kind actions and a smile?	YES	NO
10.	Do you use plain language instead of lunchroom workers' jargon when talking with the students?	YES	NO
11.	Do you welcome someone back to school who has been gone for some time?	YES	NO
12.	Do you take time to visit informally with students in the lunchroom?	YES	NO
13.	Do you wish students "Happy Birthday" on their day?	YES	NO
14.	Do you share positive thoughts with parents about their children?	YES	NO
15.	Do you share positive thoughts about your school and district with your friends and neighbors?	YES	NO
16.	Do you take pride in your lunchroom?	YES	NO
17.	Do you add personal touches to your lunchroom such as flowers on the serving line table, posters on the walls, or an attractive bulletin board?	YES	NO
18.	Do you attend training meetings to improve your working abilities?	YES	NO
19.	Do you attend school activities such as ballgames, plays, musical concerts, etc.?	YES	NO
20.	Do you have a student-teacher lunchroom advisory committee?	YES	NO
21.	Do you let students or classes plan an occasional menu?	YES	NO

SCORING

RAW SCORE

1. Give yourself one point for each YES answer. _____

ADJUSTED SCORE

1. Give yourself one bonus point for taking this inventory. _____

2. Give yourself one bonus point if you are receptive to new public relations ideas and plan to improve your personal public relations program this year. _____

3. Subtract one point if you are thinking "our lunchroom doesn't need this kind of program." _____

4. Subtract one point if you are thinking "public relations is just bragging and I think lunchrooms should do a good job and not brag about it." (Dizzy Dean says, "It ain't bragging, if you can do it.") _____

SCORE

Raw Score - Add YES answers and bonus points; then subtract NO answers and minus bonus points.

MY SCORE IS _____.

WILLIAMSON'S SCORE ANALYSIS

This self-analysis inventory is a learning aid designed to help you see what your school and lunchroom are doing in public relations.

20 Points - SUPER!
You get an "A" in public relations.

12 Points - GOOD
You get a "B" in public relations with a little work you too can have an "A."

Below 10 Points - JUNK FOOD
If you work with your students, you might rate an "A" too.

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MERCHANDISING ON THE SERVING LINE

Once you have considered the attitudes and atmosphere in your cafeteria, surveyed the likes and dislikes of your customers, involved your customers in the program, and informed both students, staff, and parents of program requirements and goals, there is another area you must review--the serving line. Consider carefully both the equipment you have to work with and the presentation of the food.

The first thing to consider is your menus. There are several basic menu planning principles you must consider:

1. USDA meal pattern requirements
2. USDA menu planning recommendations
3. Nutritional balance

Additionally, there are other principles of menu planning which can help you increase participation and acceptability of foods and meals and cut down considerably on plate waste. Some things to consider:

1. Eye Appeal
   a. Plan menus with color combinations in mind. Use at least one or two brightly colored foods in each menu.
   b. Keep in mind what the shapes and sizes of your food will look like together.

2. Temperatures of Foods
   a. When the weather is cold, meals planned with hot, substantial foods are more acceptable.
   b. Likewise when it turns hot, lighter, cooler meals are preferred.

3. Variety of Foods
   a. Plan meals with a variety and balance of textures.
   b. Be sure to vary the tastes within the meal.
   c. Plan menus to incorporate those less desirable foods with favorites.

4. Menu Presentation
   a. Use bright, colorful, exciting adjectives to describe menu items. Example: crisp vegetable sticks, fluffy rice, and ruby red tomatoes.
   b. Publicize your menu:
      (1) In local newspaper.
      (2) In school newspaper.
      (3) On blackboard or bulletin board in lunchroom.
      (4) If a student or class prepared the menu, be sure to publicize this fact.

After planning your meals, there are many other things to be done to increase the acceptability of food on the line.

The first and most important thing which affects the acceptability of the food is QUALITY. When cooking, keep the following basics in mind:

1. Vegetables should not be overcooked--the color of the vegetables should be bright and true.

2. Serve hot foods hot and cold foods cold.

3. Follow standardized recipes when seasoning and cooking. Always taste foods before serving to be certain that food is correctly seasoned and prepared.

4. If something happens in preparation and a food item is unacceptable, DO NOT SERVE IT.

Remember, public relations, merchandising, and even good presentation cannot overcome a poorly prepared meal. Bad food is bad food and nobody wants to eat burned chili or cold pizza even though these are favorite menu items.

Individual menu items must be presented in the most attractive ways possible. With a little imagination, your food can look better and even taste better, after all, we also "eat with our eyes."

Following are a few suggestions to brighten up your serving line:

1. Consider wrapping sandwiches in brightly colored foil.

2. Serve some items in attractive individual dishes.

3. Garnish a souffle cup of two ounces of peanut butter with celery dippers.

4. Sprinkle paprika on mashed potatoes, potato salad, tuna salad or other bland looking foods.

5. Add radish roses as a garnish on serving tray, salad bar, etc., for color.

6. When the meal seems dull, add a relish tray of colo ful raw vegetables. Your customers will love finger foods.

7. Garnish some salads or plates with a sprig of parsley or carrot curls.

8. When making slaw and tossed salad, add colorful vegetables like spinach, red cabbage, green peppers, carrots, etc. NOTE: Use those darker green or red outside lettuce or cabbage leaves for garnish and color--don't throw them away!

9. When garnishing pre-prepared plates, consider an orange wedge which also enhances the aroma of the meal.

10. Garnish salads or plates with hard cooked egg slices, wedges or halves for color and protein.

11. Remember some people like onions and an onion ring makes a lovely garnish which is also easy to remove.

12. For color consider using jello with fruit or vegetables to brighten up your line.

13. Add marshmallows to sweet potatoes or fruit salads for more interest.

14. Learn to cook a basic white sauce to use when serving vegetables.

15. Perk-up meat loaf with a good, colorful tomato and vegetable sauce.

16. Serve vinegar when serving "greens" for those who want it.

17. Add chili sauce to hot dogs for greater acceptability.

18. Warm hot dogs in the bun with a melted cheese topping.

When merchandising food remember only your imagination limits your choices. Most garnishes and methods of improving the "look" of your food does not have to cost a lot but the interest it adds can spark increased participation.

The last but definitely not the least area to watch is the actual serving line and equipment you use. Consider the following:

1. Does your serving line sparkle? Is it clean at all times? Even if it is old, it can be attractive.

2. Are your trays colorful, clean, and attractive?

3. Do your plates and cutlery match? Are your forks bent out of shape?

4. Do you decorate your line? Plants, artificial fruits, ballons, holiday centerpieces can all add interest to your meal.

5. Do you present your food in logical attractive sequence if possible?

6. Do you use dishpans, cartons, case containers to serve on the line? Replace them with containers which allow the food to be seen.

7. Does your serving line move quickly and easily? Can your customers reach the food?

Even attractive, well-prepared food must be properly displayed. Merchandising your meals can make your customers and staff happier. Remember, satisfied customers come back and bring people with them. This is the truest and best form of advertising.

TYPES OF FOOD SERVICE

Increased participation can frequently be generated by adding one or two different kinds of food service. Whether you serve a hot meal, salad bar, smorgasbord, fast food, or sack lunch, you must meet the USDA meal pattern requirements for a reimbursable meal.

SALAD BAR

A salad bar should be a self-service line with the opportunity for a student to choose a two ounce portion of meat or meat alternate and 3/4 cup of vegetable/fruit as well as one bread serving and milk. The following are some items which can be included on a salad bar:

Meat/Meat Alternate
Grated cheese
Shredded ham
Julienne turkey
Hard boiled eggs - whole or chopped
Kidney bean salad
Garbonza beans
Chicken salad
Ham salad

Bread/Bread Alternate
Crackers
Rolls
Macaroni salad
Rice salad

Other Foods
Peanuts or peanut granules
Chinese noodles
Bacon bits
Croutons

Vegetable/Fruit
Lettuce
Spinach (fresh)
Celery
Carrots
Radishes
Green peppers
Diced apples
Onions
Canned fruit
Raisins
Bean sprouts
Cucumbers
Zucchini
Three bean salad
Waldorf salad
Potato salad

CHEF'S SALADS - If a salad bar is not feasible in your operation, chef's salads would be a good alternative. Unlike the salad bar, the chef's salad cost can be completely controlled and the only special equipment needed is a salad bowl. A chef's salad could include the following food items to meet requirements.

Meat/Meat Alternate

- 2 oz. ham, cheese, eggs, turkey, etc., in any meat/meat alternate combination

Vegetable/Fruit (3/4-1 cup)

- Lettuce, radishes, carrots, cucumbers, onions, tomatoes, etc.

Bread/Bread Alternate

- Crackers or breads

FRUIT PLATES - A fruit plate is sometimes a welcome change to the regular meal. This is especially true during hot weather and is a good use for seasonal fruits. Cost can be controlled and only a plate is needed to serve this item. The following suggestions are offered:

Meat/Meat Alternate

- 2 oz. cottage cheese, tuna salad, chicken salad, cheese sticks/ wedges, etc.

Fruits

- Apple wedges, orange wedges, jello with fruit, pear halves, pine-apple, peaches, prunes, bananas, etc.

Bread/Bread Alternate

- Crackers or breads

SANDWICH PLATE OR SACK LUNCH

The fast food line is a choice to the regular plate lunch, the main purpose being fast service with short waiting lines. Extra supplies needed to serve the sack lunch are paper bags and sandwich bags. The sack lunch has been successfully tried in several schools. The sack lunch, like any lunch, must meet meal pattern requirements. A sack lunch could include the following:

Cold Sack Lunch

Meat/Meat Alternate

- Ham sandwich, bologna/cheese, peanut butter/jelly, cheese, etc.

Fruit/Vegetable

- Apples, oranges, pickles, bananas, raisins, carrot and celery stickes, and french fries

Bread/Bread Alternate

- Bread on sandwich

Other (Do not credit towards meal requirements.)

- Chips, cookies, etc.

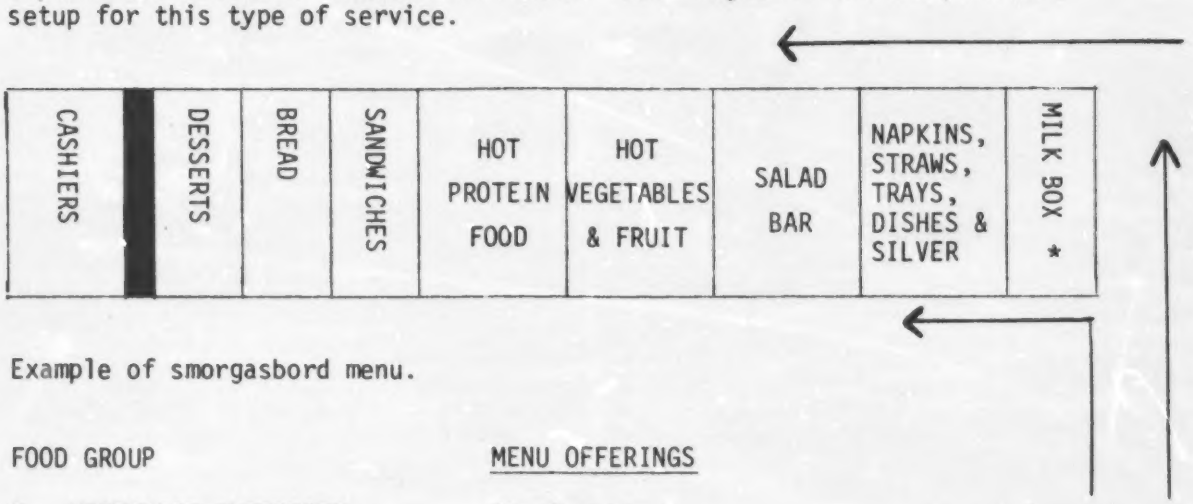
The sandwich line is another alternative to the regular plate lunch. The menu should include food items that are popular with the student body and also allow for easy and quick service. Some menu items might include:

Meat/Meat Alternate
Hamburger, cheeseburger, hot dogs, corn dogs, fish on bun

Fruits/Vegetables
French fries, tater tots, garden salad, cole slaw, fruit cup, and fresh fruits (preportioned so customers can serve themselves)

SMORGASBORD OR BUFFET SERVICE

The smorgasbord/buffet is a food service which allows students to serve themselves. Nutrition education and student involvement is necessary to explain the nature of choices available. See diagram below for possible setup for this type of service.



Example of smorgasbord menu.

FOOD GROUP	MENU OFFERINGS
I. MEAT/MEAT ALTERNATE	Chuckwagon or Turkey and Dressing
II. FRUIT/VEGETABLE	Green Beans Mashed Potatoes Buttered Spinach French Fried Potatoes School-Made Vegetable Soup Tossed Salad/Dressing Fruit Bowl Relish Dish Fresh Fruit
III. BREAD	Corn Bread Bun
IV. MILK	2% Unflavored 2% Chocolate Whole Unflavored
OTHER FOODS	Oatmeal Cookie Fruit Cobbler

* The Milk Box is best positioned at the end of the line in front of the cashier; however, the position is often determined by space constraints or the position of electrical outlets.

Tips for planning alternate menus:

1. When beginning an alternate line, the innovation and novelty will cause this line to serve more than usual at first.

2. When offering a less popular item on the plate line, be sure to plan more servings on the alternate line.

3. When serving a very popular meal, such as pizza, chili, or tacos, you will probably want to serve it on both lines and eliminate some choices.

4. When planning alternate lines, make sure the choices are clear and definite and that customers are aware of the choice. Use signs and menus to show the food on each line.

Offering different types of food service in addition to the traditional food service can increase participation and does not have to increase cost. With careful preplanning, forecasting and preparation of foods on the various lines, it is possible to contain cost and offer a wider variety of foods which can include some more expensive items which would not ordinarily be offered. When planning choices, you can serve an expensive item on one line and balance the cost by offering a popular, yet less expensive (perhaps commodity), choice on the alternate line. It is important to accurately report participation on each line on your production record so that you can forecast the amount to prepare in the future.

ACTIVITY 8 Plan a choice menu including two types of service and a variety of foods with cost a prime consideration.

TIME MANAGEMENT

During this time of smaller federal, state, and local government budgets, time management has become an essential consideration when planning and costing school meals. More and more we hear talk about "meals per labor hour" and "labor cost per plate" as justification for decreased or increased labor hours in school feeding programs. Because money is tight and labor is one area where savings can be made, it is up to us to make the most productive use of the labor hours available to produce the highest quality product acceptable to the customers served.

The first thing to be done is to determine current meals per labor hour. Once this is done and analyzed, plans can be made to run a more efficient kitchen. Following is a procedure which can be used to determine your meals per labor hour as suggested by USDA.

Example of how to compute meals per labor hour:

a) Add the total number of hours used to produce, serve, and clean up meals:

The Sunnyville School serves 385 lunches daily. There are three full-time school food service personnel working seven hours each. They are supervised by a cook-manager who works, on the average, 8 hours daily (of which 4 hours are spent in management duties). Five student workers each spend 1/2 hour daily in serving and cleanup duties. The number of labor hours spent in production, serving, and cleanup daily are:

1. Three school food service personnel at 7 hours each = 21 hours

2. One cook-manager for 4 hours = 4 hours
(8 hours of work of which only 4 hours pertain to meal production activities)

3. Five students at 1/2 hour each = 2 1/2 hours

Total hours worked = 27 hours

b) Divide the total meals served by the total hours worked:

27 1/4 hours into 385 meals = 14.0 meals per labor hour

For each hour of labor spent in meal production, service and cleanup, 14.0 meals are produced.

c) Analysis of meals per labor hour:

1. The average number of meals per labor hour for an on-site operation is approximately 13 - 16.

2. The productivity rate is useful when operations are analyzed and found to be greatly at variance with the standard. (An operation producing 14.0 meals per labor hour is not a great deal less efficient than one producing 14.8 meals per labor hour. However, an operation producing only 8.0 meals per labor hour should be studied because it appears that there may be problems which could be corrected.)

3. Many factors affect production rates such as amount of convenience foods used, skill of staff, amount and type of equipment available, complexity of menu planned and even number of meals served (the "economy of scale" concept suggests that a larger number of meals can be produced at a higher productivity rate than a smaller number of meals).

Example of a form which can be used to compute the productivity rate:

Step A: Average Daily Participation = _____

Step B: Total labor hours* worked daily by:

	Name	Total Hours
1. (Full-time employees)	_____	_____
	_____	_____
	_____	_____
	_____	_____
2. (Part-time employees)	_____	_____
	_____	_____
	_____	_____
	_____	_____
3. (Cook-manager(s)*	_____	_____
	_____	_____
4. (Student worker)	_____	_____
	_____	_____
5. (Any other personnel)	_____	_____
	_____	_____
	_____	_____
	Total Daily Hours =	_____

Step C: Productivity Rate = number lunches daily (from Part A) divided by Number of daily labor hours (from Part B)

Number meals = _____ (Part A) divided by

Number labor hours= _____ (Part B)

Productivity rate = _____ meals per labor hour

*Count only those labor hours spent in meal production, service, and cleanup.

WORK SCHEDULING

When considering how to increase efficiency in the kitchen, the first area to consider is work scheduling. A work schedule is a written outline of jobs to be performed and a schedule of who is assigned to each specific task. A work schedule informs each employee of her responsibility and the time sequence of each task. Some obvious advantages of work schedules are:

1. Saves time and energy. When a deadline is set for a particular task, it is more quickly finished than when no time limit is set.

2. Makes the job easier, and involves less effort since an employee knows what to do, and does not have to continually ask "what do you want me to do next?"

3. Increases the efficiency in the kitchen.

4. Helps employees develop a sense of security and pride in their jobs.

5. Provides less opportunity for jobs being left undone.

6. Distributes the responsibility and workload more evenly.

Work schedules can be prepared by the manager or can be done with help and input from all employees. Remember, however, that the manager has the ultimate responsibility for planning the work.

There are many types of work schedules. Following are sample schedules for an individual worker and for an elementary school. You can make your work schedule as detailed or as simple as you like, but remember workers do their best, most efficient work when they know what is expected of them.

WORK SCHEDULE: Individual

Schedule for: Mary Dobson
Hours: 8:00–1:00
Menu: Hamburgers on Bun
Tater Tots
Lettuce and Tomato Salad
Chocolate Cake
Milk
Serving time: 11:30, 12:00
Date: Monday, April 2
Position: Baker

TIME	PREPARATION	NUMBER TO PREPARE FOR	RECIPE	DIRECTIONS
8:00	Prepare cake	250	C-28	2½ times recipe
9:00	Clean area			
9:30	Coffee break			
9:40	Make icing		C-26	2½ times recipe
10:15	Wash pots and pans			
10:30	Cut cake and ice			Cut cake 6 × 10, portion onto "ice cream square" dish
	Portion up			
11:00	Eat lunch			
11:20	Set up line with desserts			
11:30	Serve on line			
12:00	Serve on line			
12:20	Put fruit in refrigerator for tomorrow			4 cans fruit cocktail 3 cans sliced peaches 2 cans USDA pineapple tidbits
12:30	Wash dining room tables			
12:45	Clean milk cooler			

Source: School Foodservice
Dorothy VanEgmond - Pannell

WORK SCHEDULE: Elementary School

MENU: Lasagne Casserole
Tossed Salad
Chilled Peach Halves
Buttered French Bread
Milk

TIME	MANAGER 7½ HR	6 HR ASSISTANT	5 HR ASSISTANT	4 HR ASSISTANT*
7:30–8:00	Make coffee or tea for teachers			
8:00–8:30	Help with lasagne sauce	Prepare lasagne		
8:30–9:00	Lunch count—Tickets		Dip up fruit and refrigerate	
9:00–9:30				
9:30–10:00	Teachers' salads		Wash vegetables for salad	
10:00–10:30	Cut bread and butter	Prepare bread crumbs for fried chicken tomorrow		Cut up vegetables for salad
10:30–11:00			Put out desserts	Set up line —napkins, straws dishes
	Eat lunch—20 min	Eat lunch—20 min	Eat lunch—20 min	
11:00–11:30	11:15 Put food on steam table	Put food on steam table	Wash pots and pans	Mix salad for first lunch
11:30–12:00	Cashier	Serving Set up for next line	Serving Help in dishroom	Back up line Dishroom
12:00–12:30	Serving	Serving Set up for next line	Cashier Help in dishroom	Back up line Dishroom
12:30–1:00	Serving	Serving Put away food	Cashier 10 min break	Back up line Dishroom
1:00–1:30	Count money—10 min break Help to clean tables	10 min break Clean tables	Clean steam table	Eat lunch* (eat on own time)
1:30–2:00	Prepare reports	Cleanup		Clean dishroom
2:00–2:30	Place orders			Help with kitchen cleanup
2:30–3:00	Take topping out of freezer and put in refrigerator for tomorrow			

Source: School Foodservice
Dorothy VanEgmond - Pannell

Some factors to think about when preparing your work schedules are:

1. All jobs, including the least desirable, must be taken into consideration and scheduled. Those least desirable can be put on a rotating basis.

2. The menus should be considered. Plan menus with the skills of employees and the equipment available. When one menu takes little preparation, plan a menu for the next day which needs pre-preparation so that all employees' time will be used to the maximum.

3. Time limits for tasks must be reasonable--not too long or too short.

4. Assign a specific task to each person. Assigning "helping" jobs to one person all the time is bad for morale.

5. Consider the skills and experience of employees. It is a waste of valuable labor hours to have an experienced cook assisting. Team an experienced worker as cook with a less skilled person assisting and cleaning up. This accomplishes two things: (a) it increases productivity, and (b) it helps train and improve the skills of the other worker.

Planning a work schedule will also help when distributing labor hours. Stagger times that employees report to work so that they can all be there during peak serving hours. Preparation and clean up should not require maximum labor hours. Once a schedule is established, it is then possible to determine when people should be at work. Consider the following:

1. Do you serve breakfast and lunch? How many people does it take to prepare breakfast? To serve breakfast? When do you need to start preparation of lunch?

2. When is your heaviest workload? How many people does it take to serve lunch? How many does it take to clean up?

3. Do you have part-time workers or student workers? Can you use them during the peak periods? Do you have volunteers? If so, what are they qualified to do?

A reminder here--student workers must not be forced to work for a free or reduced price meal. If you use student volunteers, you must send a letter to their parents stating that they do not have to work for their meals. You might also consider having a parent sign a release form stating that your school will not be held liable for accidents occurring while the students are working. Also, discuss insurance for students with district personnel. It is strongly suggested that volunteers or students not be used to operate complicated or potentially dangerous equipment.

Work schedules can be an important tool in increasing efficiency and pride in your kitchen. The whole staff will have a better understanding of procedures and what is expected of them when work schedules are made and understood. Remember, it does not have to be a complicated work schedule but letting each employee know what is expected during the work day will also help eliminate confusion and even employee conflict.

While this section contains material which gives accepted management principles, they should be considered neither mandatory nor limiting.

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WORK SIMPLIFICATION

Another area to consider when trying to utilize your labor or time at work more efficiently is work simplification. Work simplification is the process of finding the easiest, simplest way of performing an assigned task by eliminating unnecessary motion and non-productive work. Within your kitchen you probably have the resources available to increase productivity by as much as 25% and produce more with the labor or time currently available.

The staff of a school feeding program should consider the work to be done, and work out the simplest and most efficient way of getting things done. Frequently, when everyone is trained and knowledgeable in basic work simplification techniques, everyone benefits from better and safer working conditions, lessened fatigue, increased quality of foods prepared, and stablized hours and wages.

Some examples of work simplification techniques follow:

1. Use both hands at the same time whenever possible. Examples:
   a. Panning rolls. Pick up a roll in each hand and put on pan.
   b. Serving the line. Pick plate up with one hand and bring midway to meet the food that has been dipped or picked up by the other hand. Put the fastest person at the beginning of the serving line to set the speed for the other workers.

2. Perform work in a rhythmic way. Examples:
   a. Cutting with French knife. Place knife on a cutting board and with left hand move the vegetable under the knife, rock the knife up and down cutting the vegetables, and developing a rhythm.

3. Use smooth continuous, curved motions when possible. Examples:
   a. Circular motions are less tiring when doing task, like wiping tables, mopping floors, and spreading sandwiches.
   b. Spreading sandwich fillings. When spreading sandwich fillings, a circular motion without lifting the tool is most efficient.

4. Use the fewest, shortest, and simplest motions. Examples, use:
   a. Pastry brush. Use a 2-, 3-, or 4-inch pastry brush instead of a 1-inch brush for buttering bread, greasing pans, etc. By using the largest size practical, unnecessary strokes will be eliminated.
   b. Wire whip for mixing flour and water.

5. Use the available equipment that is best for the job. Examples, use:
   a. Pastry bag. Use it for stuffing celery, filling deviled eggs, and for putting decorative mayonnaise, salad dressing or whipped cream on as toppings.
   b. Portion scoops. Use them for filling muffin pans (No. 12 or 16), for cookies (No. 40), for sandwich fillings (No. 30 or 40), and for portioning Salisbury steak patties (No. 10).

6. Combine operations and eliminate all unnecessary parts of job. Examples:
   a. Cook in serving pan.
   b. Add dry milk to dry ingredients, then add water, eliminating reconstituting the milk.
   c. Congeal gelatin in souffle cup or dish in which to be served.
   d. Use one-bowl method of mixing cake.
   e. Roll biscuit or roll dough into pan and cut into squares or triangles. Approximately 9 lb. of dough into an 18 x 26 inch pan, cut 6 x 16 will yield 96 biscuits.
   f. Tools, materials, and supplies should be located close to the point of use, at a definite place, clean and in the kitchen (take equipment out of the storage room and use it).

8. Arrange work, tools, and material in sequence.

9. Arrange for physical comforts most conducive to work. Examples:
   a. Good lighting - 35 foot candles on equipment, 35-50 foot candles on work surface.
   b. Temperature between 65° and 75°F.
   c. Relative humidity at 50 to 60%.
   d. Ventilation that will change air every five minutes.
   e. Light-colored walls and ceiling without glare.
   f. Have working surfaces at the correct height and at least one stool to elevate shorter workers to make work more comfortable.
   g. Reduce noise and distraction.
   h. Rubber mats in frequently used areas reduces fatigue.

10. Eliminate unnecessary walking, reaching, stretching, and bending. Examples:
   a. Use cart to carry supplies from storeroom to work place.
   b. Put equipment that needs to be moved on wheels.
   c. Use foot pedal controls and knee lever whenever possible.

11. Standardize recipes and procedures.

12. Use the simplest way of performing job. Examples:
   a. Use uncooked noodles in assembling lasagna for baking.
   b. Oven-frying many foods is easier.
   c. Use hands (preferably in plastic gloves) for picking up or serving foods rather than other equipment when practical.
   d. Weighing dry ingredients is faster and more accurate than measuring.
   e. Put cold water over hard-cooked eggs immediately for ease in removing shell.
   f. Have pot sink ready with hot soapy water to soak pans. Five minutes in the steamer will loosen hard cooked-on residue.
   g. Separate eggs by breaking them through a small funnel. The whites go through but the yolks will not.

13. Plan for tasks that can be done in slack time. Examples:
   a. Make mixes for cakes, biscuits, and pudding in "off hours" to store for future use.
   b. Grate cheese and store in 5-lb. amounts in labeled plastic bags.
   c. Grind bread crumbs and store in labeled plastic bags.
   d. Prepare refrigerator cookie and store for future use.

Work simplification works best when everyone in the kitchen is involved in figuring out better and more efficient procedures. Try choosing one or two tasks to simplify first. Make an honest effort to cut down unnecessary steps and try new, potentially quicker and easier methods. Remember, it will not always feel comfortable at first, but if it results in a better product or a more efficient kitchen, then it has helped everyone in the school. Work simplification takes group cooperation and training. It does not happen just because you want to work better, it takes a definite effort on the part of all the employees involved!

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Appendix

CONTROL FOOD COSTS AS YOU PLAN MENUS

HOW TO CONVERT ⅛ CUP SERVINGS OF VEGETABLES AND FRUITS TO 3/8 CUP SERVINGS

FOOD BUYING GUIDE INFORMATION

LUNCH MENU AND PRODUCTION RECORD

PRECOSTING

ANSWERS TO ACTIVITIES

BIBLIOGRAPHY

CONTROL FOOD COSTS AS YOU PLAN MENUS

The principle of averaging food costs through choice menus can result in saved food dollars. Serving a low-cost food item along with a high cost one could enable you to keep food costs down. It works this way:

ENTREE

No choice - All students served pizza

300 servings	X	.36 cost/serving	=	$108.00

Choice menu - pizza or hot dog

200	X	.36	=	72.00
+ 100	X	.20	=	20.00
		cost/serving hot dog		$92.00

Net savings of $16.00 (or 15%) since some students selected hot dog.

VEGETABLE/FRUIT

No choice - All students served broccoli

300 servings	X	.14 cost/serving broccoli	=	$42.00

Choice menu - broccoli or orange juice

50	X	.14	=	7.00
250	X	.07	=	17.50
		cost/serving orange		$24.50

Net savings of $17.50 (or 41.6%) since fruit juice was more popular.

NTS/SERO
Aug., 1981

How To Convert ¼ Cup Serving of Vegetables and Fruits in the Food Buying Guide for School Food Service to 3/8 Cup Serving

1. Decide on the proper unit of purchase from Column 2.

2. In Column 4 locate the ¼ cup serving corresponding to the unit of purchase.

3. Record the figures from Column 3 which applies both to the purchase unit and the ¼ cup serving. Multiply that figure by 0.66. Round to the appropriate number. The result is the number of 3/8 cup servings per purchase unit.

   Example: In the Food Buying Guide, Applesauce, Canned, No. 10 can (¼ cup fruit)

   47.60 x 0.66 = 31.416 or rounded to 31.41

   Result: There are 31.41 3/8 cups of applesauce in a No. 10 can.

   Therefore: Multiply any form of vegetable or fruit by the factor 0.66 to convert ¼ cup servings to 3/8 cup servings.

FOOD BUYING GUIDE INFORMATION

1. Food as purchased	2. Purchase unit	3. Servings per purchase unit	4. Serving size or portion and contribution to the meal requirement	5. Purchase unit for 100 servings	6. Additional yield information
GROUND BEEF					
Market Style (no more than 30 percent fat)	Pound	11.20	1 oz cooked lean meat	8.95	1 lb AP = 0.70 lb cooked meat
(no more than 26 percent fat)	Pound	11.50	1 oz cooked lean meat	8.70	1 lb AP = 0.72 lb cooked meat
USDA-donated (special purchase) (no more than 24 percent fat)	Pound	11.60	1 oz cooked lean meat	8.60	1 lb AP = .073 lb cooked meat
CHEESE					
CHEDDAR (natural)	5 lb	80.00	1 oz cheese	1.25	1 lb = about 4 cup shredded
	Pound	16.00	1 oz cheese	6.25	
MOZZARELLA	Pound	16.00	1 slice (1 oz) (3¼x3½x1/8 in)	6.25	
PASTA (Group D)					
NOODLES					
Egg (Medium)	Pound	20.10	1/2 cup cooked (1 bread equiv)	5.00	1 lb dry = about 11 7/8 cup
Lasagna	Pound	18.20	1/2 cup cooked (1 bread equiv)	5.50	1 lb dry = about 19 pieces
TOMATOES					
Canned	No.10 can (102 oz)	48.80	1/4 cup vegetable	2.05	1 can = about 66 oz drained
		45.50	1/4 cup heated vegetable	2.20	
	Pound	7.66	1/4 cup vegetable	13.10	
		7.15	1/4 cup heated vegetable	14.00	
TOMATO PASTE					
Canned	No.10 can (111 oz)	192.00	1 tablespoon paste (1/4 cup vegetable)	.052	1 No.10 can = 12 cup paste
	Pound	27.60	1 tablespoon paste (1/4 cup vegetable)	3.65	1 No.10 can paste plus 3 cans water = 48 cup juice

LUNCH MENU & PRODUCTION RECORD

DATE: _____

MENU:

	GRADES	NUMBER PLANNED	NUMBER SERVED
GROUP III	(K-3)		
GROUP IV	(4-12)		
GROUP V	(7-12)		
ADULT/Misc/Ala Carte			
TOTAL			

1/2 pint milk required for each reimbursable lunch except where offer vs. serve applies.
*Group IV portions may be served to all students.

COMPONENTS	FOODS USED	PORTIONS PLANNED III	PORTIONS PLANNED IV	PORTIONS PLANNED V	AMT. PREPARED	AMT. LEFTOVER (Comments)
MEAT/MEAT ALT. Group III 1 1/2 oz. *Group IV 2 oz. Group V 3 oz. recommended						
VEG./FRUIT (2 or more) Group III 1/2 c. *Group IV 3/4 c. Group V 3/4 c.						
BREAD/BREAD ALTERNATE *Group III & IV 8 per week required Group V 10 recommended						
OTHER FOODS						

Above data is required by federal regulations. Use of this form is not mandatory if school food authority has an alternative form for documenting above information.

PRECOSTING

In order to determine the cost per serving of a food item, a procedure called precosting is used. The cost per serving will be determined by the number of servings per unit and the cost of a unit (lb., #10 can, etc.). Information regarding the number of servings in a unit is given in the Food Buying Guide (FBG).

HOW TO USE FOOD BUYING GUIDE DATA

The Food Buying Guide for School Food Services is developed according to the six (6) columns shown below. The columns most commonly used in the procedure for precosting menus are: Column 2, Purchase Unit; Column 3, Servings Per Purchase Unit; and Column 4, Serving Size or Portion.

Food as Purchased (1)	Purchase Unit (2)	Servings per Purchase Unit (3)	Serving size or portion and contribution to the meal requirement (4)	Purchase Units for 100 servings (5)	Additional yield information (6)
BEANS, GREEN					
Canned whole	No. 10 can (101 oz)	52.20	¼ cup vegetable	1.95	1 can = about 58 oz (13 cup) drained vegetable
	Pound	8.27	¼ cup vegetable	12.10	
Cut	No. 10 can (101 oz)	45.30	¼ cup heated vegetable	2.25	1 can = about 60 oz (12-7/8 cup) drained vegetable
		51.10	¼ cup vegetable	1.95	
	Pound	7.18	¼ cup heated vegetable	14.00	
		8.11	¼ cup vegetable	12.40	
Frozen Cut	Pound	11.60	¼ cup cooked vegetable	8.65	

The Food Buying Guide gives serving yields in column 3 by one ounce servings and 1/4 and 1/2 cup servings primarily.

To determine the number of servings in a unit, use column 3. In the example above, column 3 indicates that there are 45.3 - 1/4 cup servings of cut green beans in a No. 10 can.

PRECOSTING INDIVIDUAL FOOD ITEMS

To determine the cost of an individual food item, the following procedure may be used.

STEP 1 - Determine the cost of the food item from bid sheet or invoice.

Green Beans · 6/#10 cans per case · $7.99 per case

STEP 2 - Determine the cost of one No. 10 can of green beans by dividing the price per case by number of units in the case.

$7.99 ÷ 6 = $1.33 per No. 10 can

STEP 3 - Divide yield information in the Food Buying Guide, Column 3, into the price per unit.

$1.33 ÷ 45.3 1/4 cup servings = $.03 per 1/4 cup serving

The cost of a 1/4 cup serving of green beans is $.03.

PRECOSTING RECIPES

Some menu items will be a combination of individual food items. In this case, it is necessary to determine the cost per serving of the recipe using the following procedure.

STEP 1 - List the ingredients and amounts of each ingredient needed.

STEP 2 - List the cost per unit (lb. or can) of each ingredient.

STEP 3 - Multiply the cost per unit by the amount needed.

EXAMPLE: If the recipe calls for 7 lb. 4 oz. (7.25 lbs.) of flour, and flour costs .15¢ per pound, the cost will be determined as follows:

7.25 lb. x .15 = 1.0875 or $1.09

STEP 4 - After determining the cost of each ingredient in the recipe, total the cost and divide by the number of servings the recipe yields. If commodity foods are used as ingredients, a separate total for these foods may be determined.

E X A M P L E

RECIPE: Rolls (Card B-12) Number of servings: 100 rolls

INGREDIENTS	100 ROLLS		COST PER UNIT	COMM. COST	PURCHASED FOOD COST
	WEIGHTS	MEASURES			
Compressed Yeast or Active Dry Yeast	6 3/4 oz. or 3 1/4 oz.	3/4 cup 2 tbsp. or 1/2 cup 2 tbsp.	$ ------ .10/oz	$----- -----	$----- .33
Warm Water		3 1/2 cups	------	-----	-----
All-Purpose Flour	7 lb. 4 oz.	7 1/4 qt.	.15/lb	1.09	-----
Nonfat Dry Milk	6 1/2 oz	1 1/3 cups	.95/lb	.39	-----
Sugar	11 1/2 oz	1 2/3 cups	.28/lb	-----	.23
*Salt	2 3/4 oz	1/4 cup	------	-----	-----
Shortening softened	11 1/2 oz	1 2/3 cups	.83/lb	.58	-----
Water		1 qt 1/2 cup	------	-----	-----
		Total Commodity and Purchased Food Cost		$2.06	$0.56
		Divide Total Cost by Number of servings (100) to determine cost per roll		.0206 or $0.02	.0056 or $0.01

*It is unnecessary to precost minute amounts of seasoning such as salt.

ARRIVING AT THE STANDARD FOOD COST (PRECOST)

To complete the precosting procedure, use the methods previously given and determine the precost for all menu items in a cycle of ten menus. Each item should be precosted, and precosts totaled keeping commodities and purchased food separate. The totals for all ten menus (purchased and commodity foods figured separately) should be divided by ten (the number of menus) for the standard per meal cost. The two figures that result should be used as the standard food cost to allocate food used.

Precosting should be more than a method for allocating food cost. The precost should help you determine if a certain food item or menu is too expensive. The precost should also be used for determining the unit price and for pricing a la carte items.

ANSWERS FOR ACTIVITIES

Activity 1

1. False - High schools do not have the option. They are required by regulation to implement offer versus serve and allow students to decline 1 or 2 of the 5 required food items.

2. False - The regulation requires that full paying students pay the full price whether they take three, four or all five food items.

3. False - All five items of the school lunch pattern must be offered and available to all students.

4. True - Offer versus serve does not apply to the School Breakfast Program. All three required items (fruit/vegetable/juice, bread/bread alternate, and milk) must be served to students participating in the breakfast program.

5. False - Food items counted to meet requirements must be full portions as specified by meal pattern requirements.

6. False - No one item is required to be taken when offer versus serve is implemented.

7. False - A second serving of a food item cannot be counted as one of the required food items.

8. True - Three-fourths cup of two (or more) different vegetables or fruits is the minimum quantity required to count as two of the required food items for Grades 4-12.

9. True - Tasting portions may be offered at the option of the school, however the smaller portion could not be counted as one of the required items.

10. True - School administrators have the opition of implementing offer versus serve for the older students in an elementary school while requiring younger students to take all five required food items.

ACTIVITY 2

EXERCISES IN IDENTIFYING A REIMBURSABLE LUNCH

MENU	STUDENT TAKES:	REIMBURSABLE LUNCH? (3 of 5)
#1 Baked Chicken (2 oz meat) Whipped Potatoes (½ cup) Green Beans (¼ cup) or Broccoli (¼ cup) Hot Roll (1 serving) Milk (½ pint)	Chicken Roll Milk	Yes ✓ No ____ Why? contains 3 food items: 1) m/ma, 2) b/ba, 3) milk
#2 Spaghetti with Meat Sauce (2 oz meat, ¼ cup vegetable, ½ cup spaghetti) Tossed Salad (½ cup) Apple juice (½ cup) French Bread (1 serving) Milk (½ pint)	Spaghetti with Meat Sauce Juice	Yes ✓ No ____ Why? contains 4 food items: 1) m/ma, 2) v/f, 3) b/ba 4) v/f
#3 Vegetable and Beef Soup (¼ cup vegetable, 1 oz meat) Peanut Butter Sandwich (1 oz meat alternate, 2 servings bread) Fresh Fruit (¼ cup) Milk (½ pint)	Peanut Butter Sandwich 2 Milks	Yes ____ No ✓ Why? contains only 2 different full food items: 1) bread, 2) milk
#4 Hamburger or Fishburger on Bun (2 oz cooked meat, 2 servings bread) French Fries (½ cup) Cole Slaw (¼ cup) or Sliced Tomato and Lettuce (¼ cup) Milk (½ pint) Iced Tea (1 cup)	Hamburger French Fries Iced Tea	Yes ✓ No ____ Why? contains 3 food items: 1) m/ma, 2) b/ba, 3) v/f Tea - "other food" or a la carte
#5 Cheese Pizza (2 oz cheese, 2 servings bread) Tossed Salad (½ cup) Applesauce (½ cup) Milk (½ pint) Molasses Cookie (1)	Cheese Pizza Milk Molasses Cookie	Yes ✓ No ____ Why? contains 3 food items: 1) m/ma, 2) b/ba, 3) milk cookie - "other food"

Activity 3

Combinations of food items listed will vary for each participant. Food items listed which do not meet any meal pattern requirements are potato chips, peanuts, chicken noodle soup (canned), jello, and iced tea.

Activity 4

Meat/Meat Alternate

1. Recipe - planned servings 100

2. Ground Beef 7 lbs.
   Cheese 4 lbs + 4 lbs = 8 lbs.

3. 7 lbs Ground Beef x 11.2 (1 oz servings - marketstyle) = 78.4 1 oz servings
   8 lbs cheese x 16 (1 oz servings) = 128
   78.4 + 128 = 206.4 1 oz servings

4. 206.4 (1 oz servings per recipe) ÷ 100 (servings per recipe) = 2.06 per serving. If commodity ground beef were used the total would be 209.2 or 2.09 oz per serving.

Vegetable/fruit

1. Recipe - 100 servings planned

2. Tomato Paste - 1 #10 can
   Tomatoes 1 #10 can

3. 1 #10 can tomatoes = 48.8 ¼ cups, 1 #10 can tomato paste= 192 ¼ cups
   192 + 48.8 = 240.8 ¼ cups

4. 240.8 (¼ cups per recipe) ÷ 100 (recipe yield) = 2.4 ¼ cups per serving. Since ½ cup = 2 ¼ cups, divide 2.4 ÷ 2 = 1.2. Therefore each serving has 1.2 ½ cups of vegetable.

Bread/Bread Alternate

1. Recipe - 100 servings planned

2. Lasagna Noodles - 6 pounds

3. 6 (lbs of noodles) x 18.2 (½ cups per lb) = 109.2

4. 109.2 ÷ 100 = 1.09 ½ cups per serving or 1 bread serving

Activity 5

Question: If a child goes through the line with a grilled cheese sandwich, tomato soup, and tea would this be a reimbursable meal? Why? When?

Answer: No. This would not meet the meal pattern requirements since there are only full portions of two food items: bread and vegetable. The 1 oz. of cheese could not count as a component. This could never be a reimbursable meal. Offer vs. serve requires a minimum of 3 of 5 food items be served in full amounts. For students grades K-3, the 1 oz of cheese would still be short since the minimum requirement for Group III is 1½ oz meat/meat alternate.

Question: If a student takes a fish sandwich, peas and pears, would this be a reimbursable meal? Why? When?

Answer: Yes and No. For any school not implementing offer versus serve, this would not meet the meal pattern requirements. Only for grades K-3 in schools implementing offer versus serve and varying portions would this be a reimbursable meal. For grades 4-12, this would not meet requirements for the bread component and only 1 in the vegetable/fruit component. Since the amount of vegetable and fruit taken totaled ½ cup, this would count as 1 food item only. To count as 2 food items for grades 4-12, the vegetable/fruit must be at least 3/4 cup of two different vegetables/fruits.

Activity 6

1. What is wrong with this component?

   A. How many ounces of meat/meat alternate are needed?
   1082 1 ounce servings

   B. No - on total amounts this exceeds the requirement by 166 ounces.

   C. If you divide the 800 ounces of hot dog by the 2 ounces in each hot dog, there were only 400 hot dogs served and 541 people ate in a program not implementing offer versus serve. Either the reporting on the production record was incorrect or 141 people did not have hot dogs.

Activity 7 and Activity 8

Answers will vary for each participant.

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